

the entire land mobile industry just to restrict the few that might be using too much power.^{87/}

Commenters point out that arbitrary power limits fail to take into account users' needs for wide-area coverage, as well as unique coverage requirements, such as ribbon systems^{88/} Several commenters suggest that wide area systems should be exempt from any power/height limitations.^{89/} One commenter even notes that general power reductions as proposed by the Commission might not be feasible from a technical standpoint because some transmitters will not permit power to be reduced sufficiently to meet the Commission's proposed standards.^{90/} Moreover, use of narrowband channels and the consequent reduction of deviation is expected to reduce the signal-to-noise ratio and introduce a higher noise level that may require use of even greater ERP, not less.

of UTC's members has estimated that reducing ERP by even 1/2 (e.g., from 1000 watts to 500 watts) will reduce range by at least 25% and coverage area by about 50%. In the real world, sites are not always available at 50-mile intervals, and most private land mobile licensees do not have the luxury of limiting their operational territories to a 15-20 mile range from their transmitter site. If the Private Radio Rules are to have any relevance to the real world, they must not constrain users to the power limits proposed in the NPRM.

For all of these reasons, UTC continues to support LMCC's proposal for a two-part procedure if the Commission finds it necessary to adopt explicit guidelines on power/height: (1) use of a "safe harbor" table of power/height combinations, or (2) submission of coverage contours demonstrating use of the minimum power necessary to meet the applicant's needs.^{92/} Not surprisingly, LMCC's very reasonable proposal received widespread support among the commenters.^{93/} UTC agrees with API, AAR and APCO that, if the LMCC approach for a "safe harbor" table is adopted, it must also include LMCC's recommended

^{92/} LMCC "Consensus Plan," filed April 28, 1993, pp. 16-21.

^{93/} AMRA, p. 5; API, p. 9; APCO, p. 31; AAR, pp. 37-38; Coalition, p. 16; EFJ, p. 20; GTE, pp. 6-7; IMSA, pp. 5-6; Joint Commenters, pp. 15-16; MPC, p. 20; Motorola, p. 30; NABER, p. 28; TIA, pp. 20-21; and UTC, pp. 43-46.

alternative procedure for submission of contours.^{94/} Any table of power/height combinations would be premised on averages and assumptions, and could not take into consideration the many variables that are involved in designing radio systems to achieve requisite coverage. Even though the "safe harbor" table should help to streamline the licensing process, the rules must provide an escape clause for systems that do not meet these parameters. LMCC's two-part procedure would provide the flexibility needed by licensees without imposing unreasonable administrative burdens on applicants or the Commission.^{95/}

Even the alternative procedures suggested by other commenters would be accommodated under LMCC's proposal. APCO, for example, suggests that public safety frequency coordinators should be required to recommend power, height, and antenna patterns, including downtilts, that will limit signals to the area of political responsibility of public safety licensees.^{96/} Similarly, AASHTO suggests specific

^{94/} API, p. 9; AAR, pp. 37-38; and APCO, p. 31.

^{95/} In its Comments, UTC indicated that its support for the LMCC safe harbor table did not necessarily include endorsement of the use of R-6602 curves in preparing the table. UTC, p. 44 n.41. Motorola expressed similar reservations as to the use of R-6602 in preparing this table. Motorola, p. 30.

^{96/} APCO, p. 31.

field strength limits at the outer geographic boundaries of the system.^{97/} Both of these recommendations would be permissible under the LMCC proposal.

NABER recommends establishing three different power level categories in each service pool: (1) high power systems with operational parameters similar to today's environment; (2) low power, site-specific systems with a need for on-site use at permanent locations; and (3) low power, non-site specific systems with a need for on-site use at non-permanent locations.^{98/} NABER would couple this with the creation of incentives to achieve exclusivity over smaller service areas. As discussed below,^{99/} UTC cannot support NABER's proposal to condition exclusivity on an as-yet undefined efficiency or loading factor. In any event, the exclusive use provisions could not serve as a surrogate means for limiting "overly powerful systems" because they would only restrict licensees applying for exclusive use. Presumably, licensees who are sophisticated enough to apply for exclusive use overlay status are not the source of the Commission's concern.

^{97/} AASHTO, pp. 6-7.

^{98/} NABER, p. 27.

^{99/} See Section VI, below.

Based on its experience with the 220-222 MHz band, SEA, Inc. recommends adoption of separate co-channel geographic separation schedules for urban and non-urban environments, with companion ERP/antenna height limits. The schedules would be predicated on an urban 50-mile reuse and a predominant non-urban 75-mile reuse environment.^{100/}

channels to 20 watts ERP whereas these channels currently
may be used with up to 50 watts output power 102/ umc

The EUO concept is well-supported by the parties, as is the concept of flexible EUO areas, which was supported by various parties, including: AMRA^{103/}, API^{104/}, the Coalition^{105/}, and the Joint Commenters^{106/}. As explained in the LMCC "Consensus Plan" and UTC's Comments, this proposal would permit a licensee to establish an EUO radius based on its system size as determined by the power/height tables. According to the Coalition, a flexible EUO approach is needed because system coverage and protection requirements vary greatly from system to system.^{107/} The Coalition further points out that the signal ratios incorporated in the power/height tables can be used to "engineer" systems that are even closer than the tables would allow.^{108/}

Some parties have voiced their concern that the flexible EUO area would be inconsistent with use of the "safe harbor" tables. This concern stems from a basic misunderstanding of the purpose of EUO -- to protect the EUO licensee's service territory. EUO should not provide

^{103/} AMRA, p. 8.

^{104/} API, p. 11.

^{105/} Coalition, p. 21.

^{106/} Joint Commenters, p. 18.

^{107/} Coalition, p. 21.

^{108/} Coalition, p. 21.

protection for vast areas around the EUO licensee's service territory, except as needed to protect the EUO licensee from interference caused by new systems. Under flexible EUO, EUO licenses would have the right to enforce the separation guidelines of the "safe harbor" tables against new systems. The flexible EUO proposal does not protect against all new systems geographically proximate to the EUO licensee, just against new systems which would be licensed in contradiction of the proposed safe harbor tables. An EUO licensee would be able to enforce the mileage separations found in the tables against new systems, but would not be entitled to restrict the construction of new systems that meet the separations distances specified in the safe harbor table.^{109/}

Licensees would still have to obtain concurrence from existing licensees in order to obtain EUO, but only from those licensees that are operating closer than would be allowed under the tables. The EUO licensees would not have to obtain concurrences for EUO from those licensees that

^{109/} Licensees which require higher-power systems may, under UTC's plan, file coverage contours instead of using the safe harbor tables. In such cases, the use of the safe harbor tables may be inappropriate. For EUO coordination purposes, therefore, these high-power systems would be deemed to have larger service territories. For instance, a 5-mile high-power station may be treated as a 10-mile station in order to determine whether the separation distance is sufficient.

licensee fails to get concurrences from all co-channel licensees, the EUO licensee would still be eligible for EUO out to the distance of the closest non-concurring licensee.

Once licensee A obtains EUO, it would be permitted to enforce the distances specified in the safe harbor table against new licensees or against modifications proposed by existing licensees. Using the chart in Appendix 1 as an illustration, this would mean that licensee A would be able to prevent the licensing of proposed system D because it would be closer than allowed by the table.^{113/} For the same reason, licensee A would be able to prevent the modification of system B. Licensee A, however, would be unable to prevent the licensing of proposed system E because this system is sufficiently separated from licensee A.^{114/} Licensee A would also be able to prevent any modifications to system C that would result in system C being closer to system A than is recommended by the table.

Flexibility in determining the size of the EUO area should not result in variable loading criterion. UTC

^{113/} According to the table, proposed system D, a 30-mile system, should be separated from system A, a 30-mile system, by 98 miles.

^{114/} Proposed system E, a 2-mile system, would need to be separated from system A, a 30-mile system, by only 69 miles according to the table.

are operating systems which are sufficiently separated from the EUO licensee's system.

The flexible EUO concept is easy to understand. A licensee desiring EUO would seek concurrence from all

strongly opposes the proposal of NABER and the Joint Commenters to make the size of the EUO area requested dependent on the system's loading.^{115/} NABER claims that this proposal would provide applicants with an incentive to request only as large an EUO area as is necessary, and would reduce the burden on the Commission and on the frequency advisory committees by eliminating the need to determine whether the service area requested matches the technical parameters in the application.^{116/}

NABER's arguments are unpersuasive. First, the "Exclusivity for Efficiency" proposal would unnecessarily restrict EUO and unfairly penalize licensees with large operating territories. NABER's proposal would require licensees with large operating territories which require large EUO areas to be "super-saturated" with mobiles. Under NABER's plan, therefore, a large area licensee may very well be unable to request as large an EUO area as is necessary to protect its system. Second, NABER's plan does not guarantee that the most efficient use is being made of the spectrum. Large-area licensees which are not super-saturated would be unable to obtain appropriate EUO areas even if they are making more efficient use of the spectrum than any other co-channel licensee in that area. Finally,

^{115/} NABER, pp 16-18; Joint Commenters, p. 18.

^{116/} NABER, p. 17.

NABER's plan would not reduce the burden on the Commission and coordinators, which would still have to ensure that the sliding-scale loading standard has been met for the requested EUO area and that all necessary concurrences have been obtained.

Instead of tying the size of the EUO area directly to mobile loading, the Commission should apply its proposed loading requirements as a minimum criterion for EUO licensing. The minimum loading criterion would provide the basis for determining whether a system is making sufficient use of the spectrum to merit EUO. However, once the threshold loading criterion is met, system loading should not play any role in the size of the applicant's EUO radius. Unlike NABER's plan, UTC's flexible EUO plan would allow market forces to determine what size EUO areas licensees may obtain and would thereby guarantee that only those who place the greatest value on the spectrum, and are therefore willing to expend the effort necessary to obtain the necessary concurrences, are able to obtain largest EUO areas.

UTC opposes the suggestion of AICC that limited sharing of EUO channels should be required with other users of the same classification if no other appropriate spectrum

is available.^{117/} Such sharing is contrary to the main reason for proposing EUO -- to permit a degree of exclusivity in the PLMR bands below 512 MHz. Requiring licensees that have obtained the necessary concurrences and met the loading or public safety criterion to give up this exclusivity simply because an additional user cannot find an "appropriate" frequency would be unfair. In such cases, the market should be left to provide the solution, which may include use of other available frequencies or technology or a voluntary sharing agreement with existing licensees.

UTC's Comments also urged the Commission to clarify that Sections 88.187(d) and 88.191(d) would apply to systems used for safety-related functions although not necessarily operating in the Public Safety Radio Services pool. This clarification is necessary to ensure that there is no arbitrary difference between systems meeting the definition of critical-use systems but licensed in different service pools.

Similarly, UTC supports AICC's and API's requests that the Commission clarify that the "public safety" exemption includes services that are closely related to or necessary for public safety. AICC requests that systems

^{117/} AICC, p. 36.

which are used to render services directly related to public safety be exempted, at least partially, from the EUO loading requirements.^{118/} API requests that the EUO loading requirements should be waived for systems in rural areas that demonstrate a need for EUO based on safety considerations.^{119/} Providing this clarification would serve the public interest by ensuring that all important public safety systems could receive the protection of EUO. However, UTC opposes the request of AAA that Automobile Radio Service operations should be included in the "public safety" exception as these services are not necessarily related to public safety.

In its Comments, UTC argued that the Commission should provide enough flexibility in its EUO rules to permit mobile-only systems to obtain EUO and, conversely, to protect EUO licensees against interference from mobile-only systems. UTC also recommended that mobile-only system licensees seeking EUO status be subject to the same rules as systems with base stations, including: (1) permitting

^{118/} AICC, p. 35.

^{119/} API, p. 11. Mitchell also argues that applicants demonstrating a need for EUO based on safety considerations should be exempted from the loading requirements. Mitchell, p. 5. However, because there is a public safety exception already proposed in the rules, it appears that Mitchell is simply seeking to expand the exception to cover its own non-imminent danger operations. Thus, Mitchell's request for an expanded public safety exception should be denied.

EUO license applicants to tailor the size of the EUO area to the size of the service area (as proposed above); and (2) requiring the satisfaction of applicable minimum loading requirements.

UTC does not seek special treatment for mobile-only systems with regard to the mobile loading standard and, therefore, agrees with the statement of Coastal that mobile-only systems should be included in EUO if these systems meet the loading criteria.^{120/} However, UTC disagrees with relaxing the mobile loading standard, as is suggested by several parties. For example, AAA proposes that EUO be based on showing of active use, such as statistics of call volume.^{121/} AMRA supports permitting EUO where the applicant proposes a communications system that requires exclusivity.^{122/} AAR requests that Railroad Radio Service be exempt from the loading requirements because channel utilization measures are "inappropriate" for this service.^{123/} MCI supports the use of information regarding a licensee's average and peak number of minutes

^{120/} Coastal, p. 8.

^{121/} AAA, p. 28.

^{122/} AMRA, p. 8.

^{123/} AAR, p. 16.

per day and daily patterns of use instead of a mobile loading standard.^{124/}

UTC opposes relaxing the proposed loading criterion, and believes that none of the suggested modifications are as workable or objective as a mobile loading standard. For example, while UTC is not opposed in principal to the use of call volume statistics, as proposed by AAA and MCI, UTC is opposed to the use of such statistics without first establishing: (1) a usage level which would ensure equivalent efficiency with the mobile loading criteria; and (2) mechanism for verifying the usage data.^{125/} As presented, therefore, the use of call volume statistics involves a degree of uncertainty not present in a simple mobile loading standard. Moreover, because not all licensees can easily identify call usage, use of these statistics must not be mandated for any types of systems, but at most may be an alternative to mobile loading.

Permitting systems whose implementation require exclusivity to obtain EUO without regard to mobile loading

^{124/} MCI, p. 2.

^{125/} Moreover, the Commission has recently questioned

would be ineffective in ensuring spectral efficiency. The implementation of systems which require exclusivity does not ensure that these systems are using the spectrum efficiently. Also, by rewarding systems that require exclusivity, the proposal would encourage the implementation of such systems and reduce spectrum sharing. As a result, less efficient use of the spectrum would be made.

B. Extended Implementation Should Be Permitted For Certain Types Of Systems

Section 88.135 of the proposed rules would permit an applicant an extended period of up to five years to place a station in operation in certain situations. UTC supports this extended implementation period as necessary to provide the flexibility to permit the construction of systems by

proposed extended implementation period with the Commission's recent decision in PR Docket 92-210 to permit extended implementation schedules for PLMR applicants for 800 MHz frequencies.^{126/}

VII. CONCLUSION

While the commenters commend the FCC for its initiative to make more effective and efficient use of the bands below 512 MHz, the comments reveal widespread dissatisfaction with many of the Commission's specific proposals. Significantly, a number of the FCC's proposals evidence a fundamental lack of understanding as to the essential purpose of the private land mobile radio

The FCC's proposed two-step transition to very narrowband technology is unworkable and unsupportable. In the 150-174 MHz VHF high-band, the overwhelming majority of comments favor the adoption of LMCC's "Option A." However, a separate "offset overlay" proposal has sufficient facial attraction to warrant further consideration. Accordingly, UTC urges the FCC to defer from making any final decision on the VHF high-band and instead initiate a "Further Notice of Proposed Rulemaking" to more fully examine the options presented for the VHF high-band.

Commenters also join UTC in opposing the FCC's impractical transition plan for the 421-512 MHz band. UTC urges the FCC to, instead, adopt the more reasonable and graceful plan LMCC "Consensus Plan" as modified by UTC to permit continued use of wideband channels in non-congested rural areas.

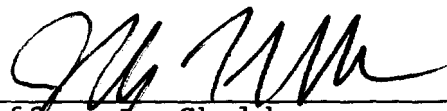
Commenters were virtually unanimous in opposing the FCC's proposal for strict power/height limits to permit frequency reuse at standard 50-mile spacings. If explicit guidelines on power/height are required, UTC joins the many commenters who have recommended adoption of LMCC's two-part procedure for a safe harbor table of permissible power/height combinations and a procedure for submission of coverage contours.

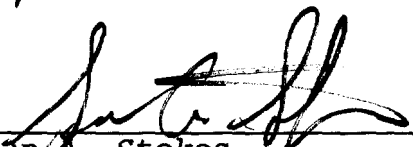
UTC urges the FCC to adopt a flexible EUO plan under which EUO licenses would have the right to enforce the separations guidelines of the safe harbor tables against new systems. Under this plan, licensees would still have to obtain concurrence from existing licensees in order to obtain EUO, but only from those licensees that are operating closer than would be allowed under the tables. EUO should not be dependent on the system's loading. Further, mobile-only systems should be included in EUO only if these systems meet the loading criteria.

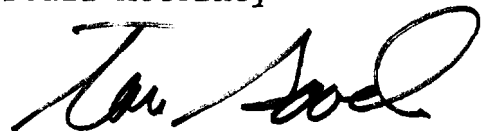
WHEREFORE, THE PREMISES CONSIDERED, the Utilities Telecommunications Council respectfully requests the Commission to take actions consistent with the views expressed herein.

Respectfully submitted,

UTILITIES TELECOMMUNICATIONS
COUNCIL

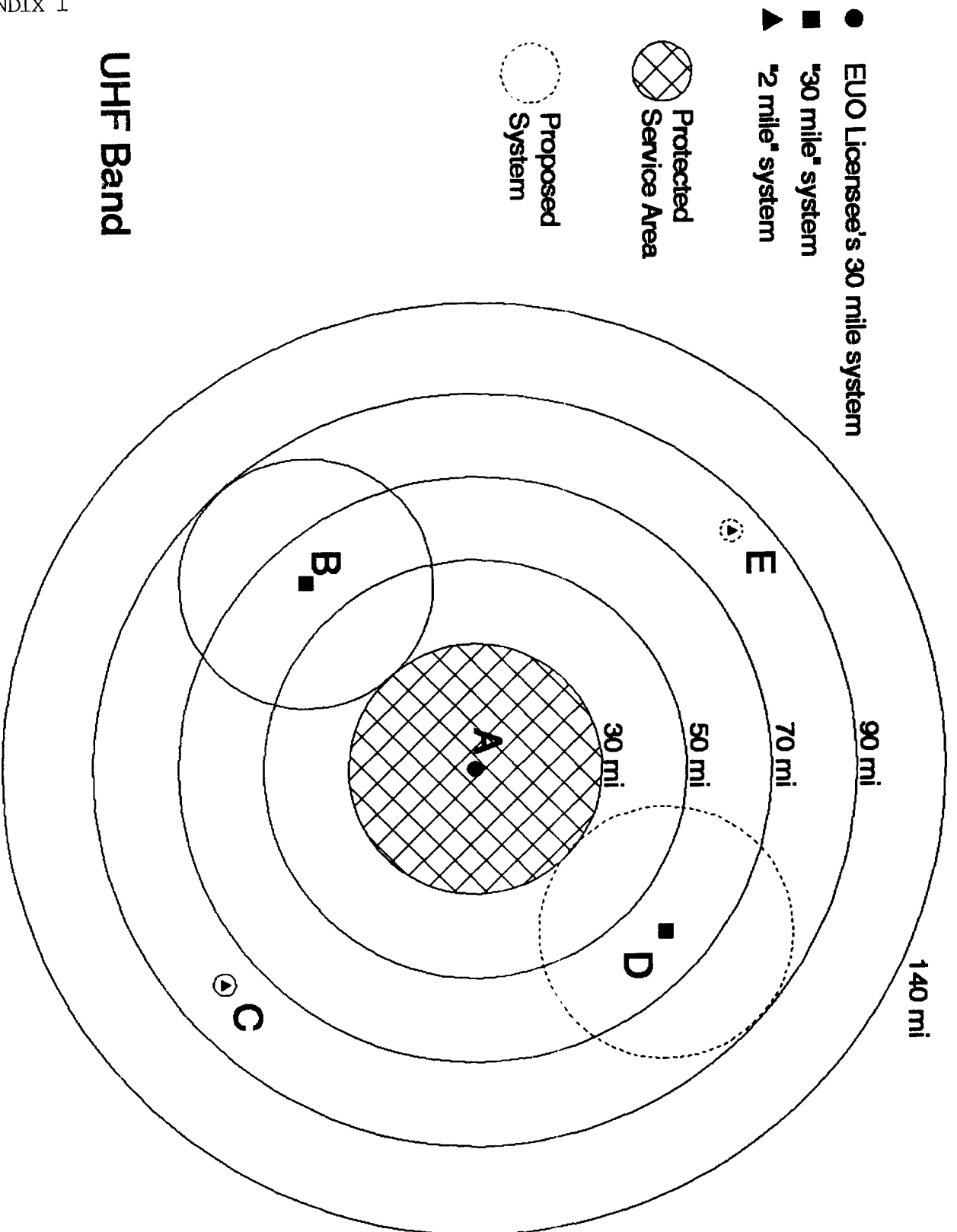
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July 30, 1993



CERTIFICATE OF SERVICE

I, Kim Winborne, a secretary with the Utilities Telecommunications Council, hereby certify that I have caused to delivered by hand, this 30th day of July, 1993, a copy of the foregoing "Reply Comments of the Utilities Telecommunications Council" to each of the following:

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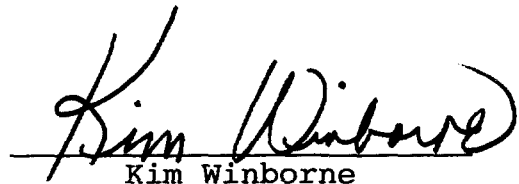
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